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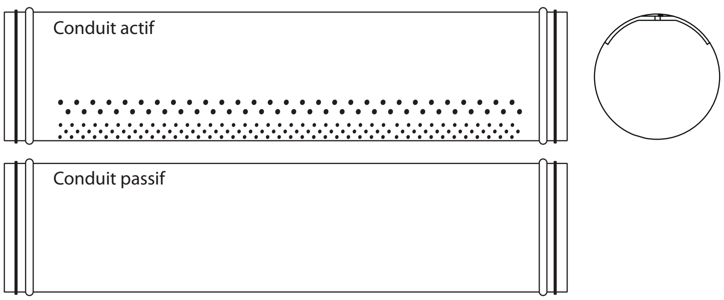
MADE IN CANADA

RDD Submittal

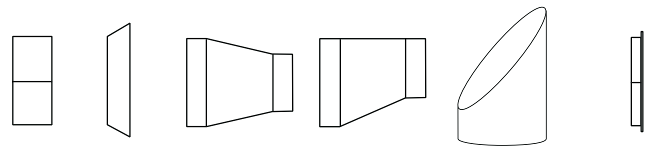
Date	
Project	
Engineer	
Contractor	



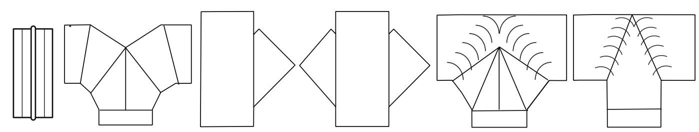
All of the standard accessories (elbows, sleeves, reducers, multi-branch connectors, etc.) are available in the precise dimensions of the ducts.

Accessories

big-end



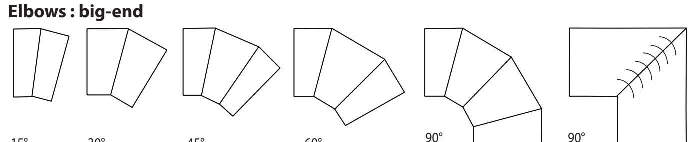
Small end



For S and W, add an elbow and an interior sleeve with the same degree and Ø chosen to complete the fitting

For D and Q, the inlet and the outlet diameters are the same

Elbows : big-end



Le diffuseur

- Tubular diffuser
- Made of 22 ga brushed steel for ducts inferior to 457 mm (18 in) in diameter, and 20 ga for ducts with diameter superior or equal to 457 mm (18 in).
- Diameters ranging from 203 mm (8 in) to 1419 mm (56 in)
- Seal between sections with a PVC gasket.
- Sealed
- Assembly using union sleeves.
- Steel reinforcements installed inside ducts of more than 433 mm (17 in) in diameter
- Painted with a TGIC-free polyester powder coat.
- RAL colour chosen by the architect or the customer.
- Hole pattern determined with the help of a computer program.
- Burr-free holes shall be made with a laser cutter.
- Easy to clean
- Reducer or perforated balancing damper install after 5 sections
- Can be active or passive (without holes)

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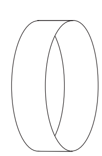
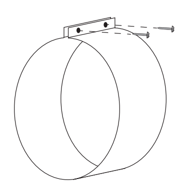
Assembly

The sections of the RDD diffuser are assembled with sleeves, which are adapted to the diameter of the air duct

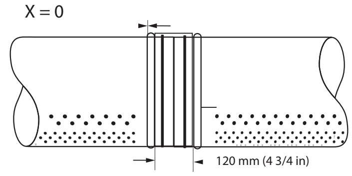


Sleeve for diffusers with a diameter of 762 mm (30 in) and less

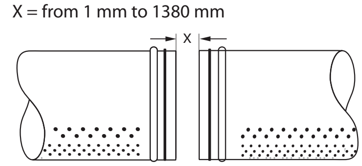


Sleeve for diffusers with a diameter of 787 mm (31 in)and more

Standard sleeve: 120 mm (4 3/4 in)
(no space between RDD)
X = 0



Special sleeve (X = spacing between RDD)
X = from 1 mm to 1380 mm



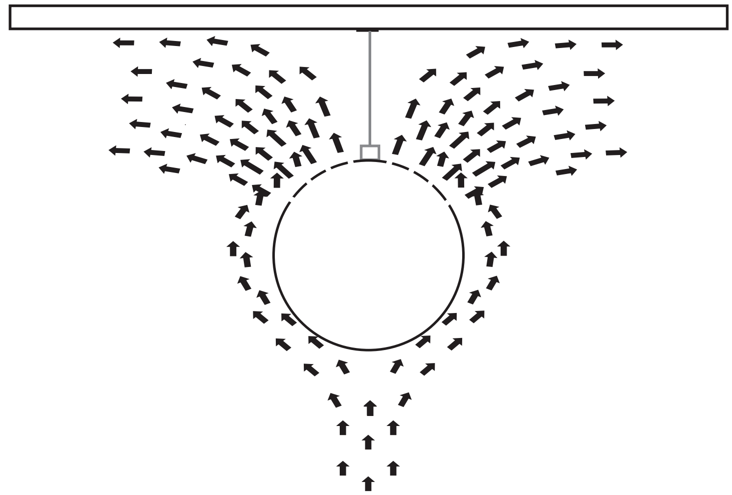
RDD - Écoulement et direction de l'air

Fonctionnement général

The RDD diffuser is made to surpass the technical limits of traditional air diffusion systems. Its function is based on the principle of high induction diffusion. The perforations of different diameters and their positioning on the RDD promote a displacement of a large quantity of ambient air (see the illustration below).

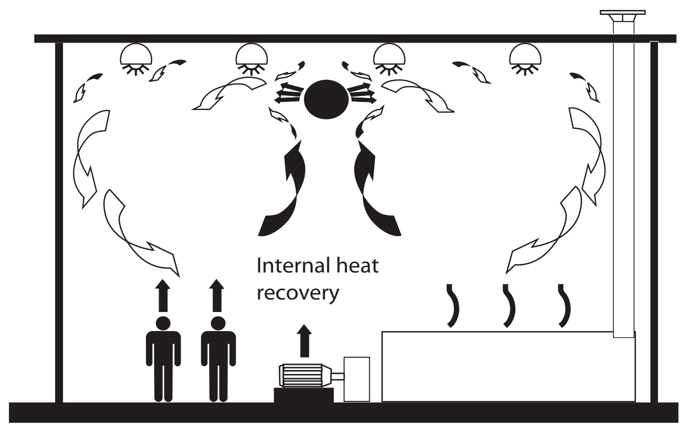
The thermal exchange between blown air and ambient air occurs close to the RDD and the temperatures rapidly near isothermal levels. The risk of stratification is eliminated, without creating drafts in the occupied zone.

Representation of the effect of the induction generated by a RDD diffuser.



Heat recovery

In this type of situation, in a space where internal heat sources are very high, it allows for much more significant energy savings Supplying a room with 100% outside air in winter without heating demand is dependent on external temperatures. The internal heat, generated by heat sources (heat generated by machines, lighting, employees etc.), is possible with the RDD high induction duct diffuser..



Height of the area Diffusion mode

For areas with **elevated ceilings** (H > 6 m (20 ft)), the RDD is perforated to diffuse air downwards for both heating and cooling modes.

In the case of heating mode, air is directed downwards to combat the force of gravity, both exerted on the different densities of warm blown air and cooler ambient air (figure A). The large mass of air circulates in a controlled manner, from the top to the bottom of the room for an optimal temperature mixture. The difference of temperature throughout the occupied area is not greater than 1°C

For rooms with **lower ceilings** (H < 6 m (20 ft)), the air is pushed upwards through the RDD (see figure B). For cooling mode, the multitude of perforations with various diameters allow the air to be pushed upwards, to mix with the rooms hot air which often accumulates towards the ceiling.

Figure A :
Heating mode at an elevated height - *H > 6m (20 ft)*

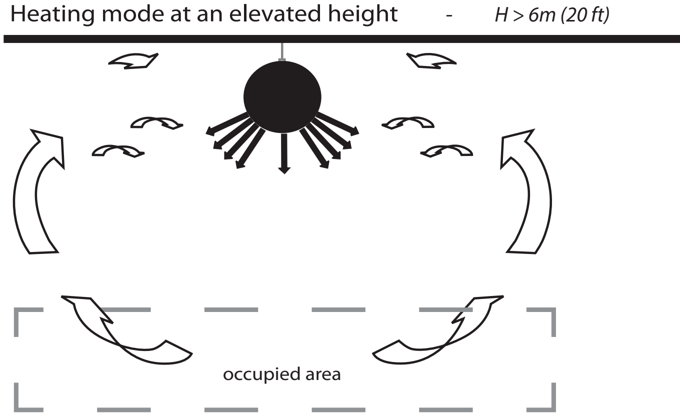
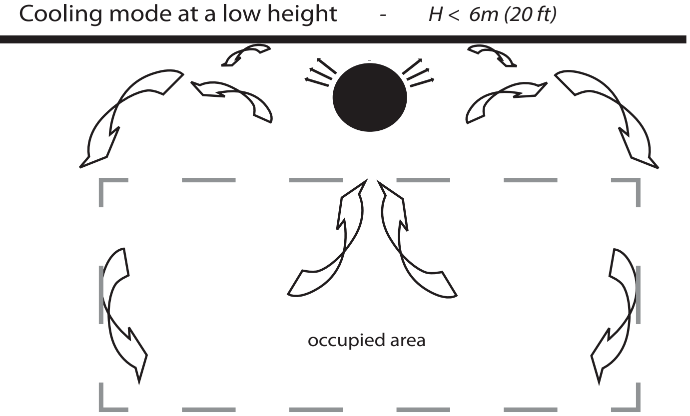
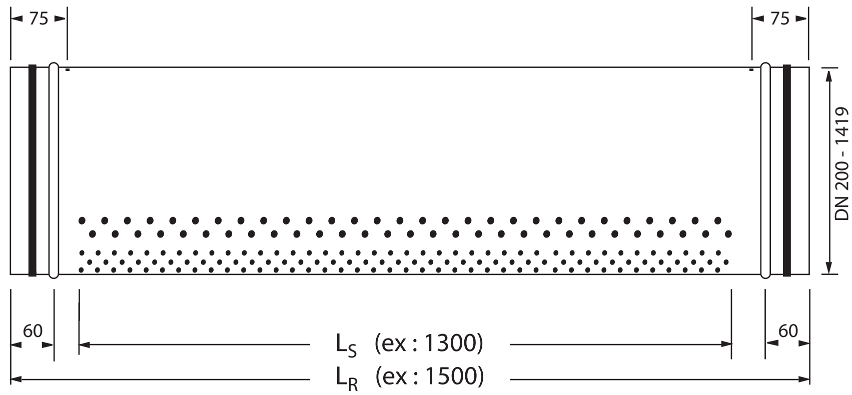


Figure B :
Cooling mode at a low height - *H < 6m (20 ft)*



RDD - Dimension and weight

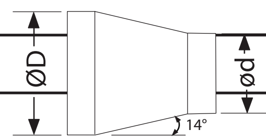
RDD diameter (mm)	Duct length - L_R: 1000	1500	1700
	Weight of passive RDD (kg)		
	Sheet thickness: 0.85 mm		
200	4.20	6.38	7.15
251	5.28	7.92	8.97
302	6.35	9.52	10.79
353	7.42	11.13	12.69
403	8.47	12.71	14.40
	Sheet thickness: 1.00 mm		
454	11.41	17.00	19.30
505	12.67	18.93	21.43
556	13.94	20.83	23.58
607	15.69	23.21	26.22
657	16.93	25.07	28.32
708	18.97	27.74	31.25
759	20.33	29.74	33.50
810	21.70	31.73	35.75
861	23.07	33.73	38.00
911	24.40	35.69	40.21
962	26.40	38.31	43.08
1013	27.79	40.35	45.37
1064	29.19	42.38	47.65
1115	30.59	44.41	49.93
1165	31.96	46.40	52.17
1216	33.36	48.43	54.46
1267	34.76	50.46	56.74
1318	36.16	52.49	59.02
1369	37.56	54.52	61.31
1419	38.93	56.51	63.55
		Standard	



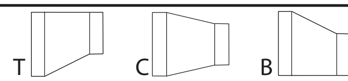
RDD - Codification

Code	Field
RDD	Product
1000, 1500, 1800	Lenght L_R
200, 251, 302, 353, 403, 454, 505, 556, 607, 657, 708, 759, 810, 861, 911, 962, 1013, 1064, 1115, 1165, 1216, 1267, 1318, 1369, 1419	Duct diameter
A = Active (with perforation) X = Passive (without perforation)	Perforation
9003 = White 9010 = Cream 00SB = Solar Black (standard matte black) 00SM = Silver Matte (standard metallic grey) ____ = RAL color (write the color number of RAL)	Color of the diffuser
A = With closed-cell insulation X = Without insulation	Insulation
D = With damper X = Without damper	Balancing damper
RDD - 1500 - 200 - A - 9003 - X - X	Example

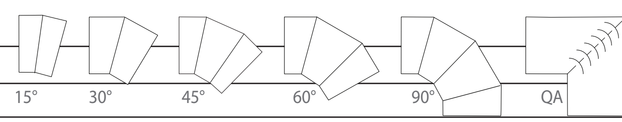
Codification for reducers



Code	Field
RDD RED = Reducer	Product
254, 305, 356, 406, 457, 508, 559, 610, 660, 711, 762, 813, 864, 914, 965, 1016, 1067, 1118, 1168, 1219, 1270, 1321, 1372, 1422	Ø D - Input diameter
203, 254, 305, 356, 406, 457, 508, 559, 610, 660, 711, 762, 813, 864, 914, 965, 1016, 1067, 1118, 1168, 1219, 1270, 1321, 1372	Ø d - Output diameter
T = Flat on Top (Standard) C = Centered B = Flat on Bottom	Configuration
S = Standard α = 14° A = Other (specify in annotation)	Length
9003 = White, 9010 = Cream 00SB = Solar Black (standard matte black) 00SM = Silver Matte (standard metallic grey) ____ = RAL color (write the RAL color number)	Color
A = With closed-cell insulation X = Without insulation	Insulation
RDD - RED - 305 - 203 - T - S - 9003 - X	Example



Codification for elbows

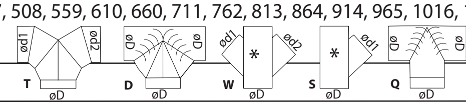


Code	Field
RDD ELB = Elbows	Product
15, 30, 45, 60, 90, QA	Angle
203, 254, 305, 356, 406, 457, 508, 559, 610, 660, 711, 762, 813, 864, 914, 965, 1016, 1067, 1118, 1168, 1219, 1270, 1321, 1372, 1422	Ø Diameter
S = Standard (based on: r = 1.5 D) A = Other (specify in annotation)	Radius
9003 = White 9010 = Cream White 00SB = Standard matte black 00SM = Silver matte (standard metallic grey) _____ = RAL colors (write the RAL color number)	Color
A = With closed-cell insulation X = Without insulation	Insulation
RDD - ELB - 15 - 203 - S - 9003 - X	Example

RDD - Codification

Codification for the branches

Code	Description	Field
RDD	BRA = Branches	Product
	203, 254, 305, 356, 406, 457, 508, 559, 610, 660, 711, 762, 813, 864, 914, 965, 1016, 1067, 1118, 1168, 1219, 1270, 1321, 1372, 1422 — **(Note : For Q and D, inlet and outlet diameters are the same)**	**ØD - Inlet diameter**
	203, 254, 305, 356, 406, 457, 508, 559, 610, 660, 711, 762, 813, 864, 914, 965, 1016, 1067, 1118, 1168, 1219, 1270, 1321, 1372, 1422 — **(Note : For Q and D, inlet and outlet diameters are the same)**	**Ød1 - Outlet diameter (for T , W and S only)**
	203, 254, 305, 356, 406, 457, 508, 559, 610, 660, 711, 762, 813, 864, 914, 965, 1016, 1067, 1118, 1168, 1219, 1270, 1321, 1372, 1422	**Ød2 - Outlet diameter (for T and W only)**
	T, D, W, S, Q	**Configuration**
	9003 = White; 9010 = Cream; 00SB = Standard Matte Black; 00SM = Standard Metallic Grey; ____ = RAL colors * (write the color number of RAL)	**Color**
	A = With closed-cell insulation; X = Without insulation	**Insulation**

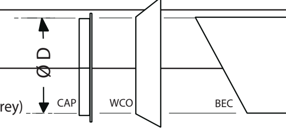


* for S and W, add an elbow to degree and diameter choosed to completed the fitting

Example: RDD - BRA - 305 - 305 - 203 - T - 9003 - X

Codification for endcaps and collars

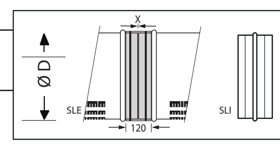
Code	Description	Field
RDD	CAP (End cap), WCO (Collar), BEC (Bevelled endcap), BES (Bevelled endcap + slots -return), BEG (Bevelled endcap + grid -return)	**Product**
	203, 254, 305, 356, 406, 457, 508, 559, 610, 660, 711, 762, 813, 864, 914, 965, 1016, 1067, 1118, 1168, 1219, 1270, 1321, 1372, 1422	**Ø Diameter**
	9003 = White; 9010 = Cream White; 00SB = Solar Black (standard matte black); 00SM = Silver Matte (standard metallic grey); ____ = RAL colors (write the RAL color number)	**Color**
	A = With closed-cell insulation; X = Without insulation	**Insulation**



Example: RDD - CAP - 203 - 9003 - X

Codification for sleeves

Code	Description	Field
RDD	SLE (Sleeve) , SLI (Inner sleeve) (no length available)	**Product**
	203, 254, 305, 356, 406, 457, 508, 559, 610, 660, 711, 762, 813, 864, 914, 965, 1016, 1067, 1118, 1168, 1219, 1270, 1321, 1372, 1422	**Ø Diameter of SLE**
	200, 251, 302, 353, 403, 454, 505, 556, 607, 657, 708, 759, 810, 861, 911, 962, 1013, 1064, 1115, 1165, 1216, 1267, 1318, 1369, 1419	**Ø Diameter of SLI**
	XXXX = Non applicable (SLI); 0000 = Standard (The distance between RRA is 0 mm); ____ = Special - write the «x» value (distance between RRA) - from 0001 mm to 1380 mm (54 in) maximum	**Length of the SLE**
	9003 = White, 9010 = Cream white, 00SB = Standard matte Black , 00SM = Silver Matte (standard metallic grey); ____ = RAL colors (write the RAL color number)	**Color**
	A = With closed-cell insulation; X = Without insulation	**Insulation**



Example: RDD - SLE - 203 - 0000 - 9003 - X

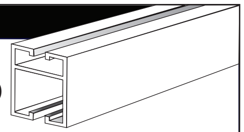
RDD - Codification - suspension system

Anchorage with rail

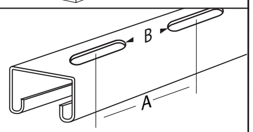
Description

RAI

ALU Aluminum rail
(1 1/4 in x 1 3/4 in x 10 ft)



S33 Steel rail
(1 5/8 in x 7/8 in x 10 ft)



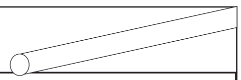
A : 2 po B : 7/8 po

Color

9003 = White 00SB = Solar Black
9010 = Cream 00SM = Silver Matte
____ = Color RAL * (write the #)
XXXX = Unpainted

Example: RAI - ALU - 9003

RCT Rod cover for threaded rod
16 mm X 3.05 m (5/8 in X 10 ft)



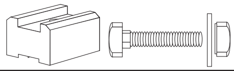
Color

9003 = White 00SB = Solar Black
9010 = Cream 00SM = Silver Matte
____ = Color RAL * (write the #)
XXXX = Unpainted

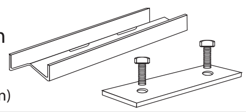
Example: RCT - 9003

Accessories supplied for aluminum rail (ALU)

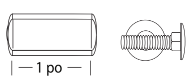
RKG Nylon guides assembly



RKJ Junction bar plate
200 mm x 28 mm x 12 mm
(7 13/16 x 1/2 X 1 1/16 in)
Plate: 60 mm x 16 mm (2 3/8 X 5/8 in)

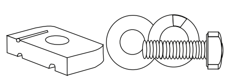


RKC Coupling assembly with bolt and washer for installation with aluminum rail (ALU)



Accessories supplied for steel rail (S33)

RKS Slider, bolt and washer assembly



Example: RKG

Touch-up spray paint

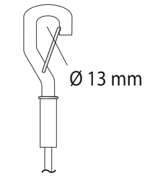
CAN 9003 Paint can (RAL 9003)
CAN _____ Paint can (other color RAL)
(write the RAL color number)

Example: CAN - 9003

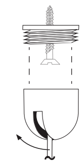
Anchorage with cable

Description of anchors for the ceiling

CPA Anchor with hook
nickel plated
Ø 13 mm x 70 mm x 14.3 mm
(Ø 1/2 in x 2 3/4 in x 9/16 in)

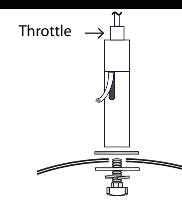


CCP Swiveling anchor
nickel plated
Not adjustable
Ø 25 x 28.5 mm
(Ø 1 in x 1 1/8 in)
(screw not supplied)



Description of anchor for the diffuser

CCA Anchor for duct
Adjustment throttle
nickel plated
Ø 19 x 50 mm
(Ø 3/4 in x 2 in)



Cable length

XXXX = Without cable
3048 mm - standard (10 ft)

A = Nickel plated steel (standard)
S = Stainless Steel (optional)

Example: CPA - 3048 - A

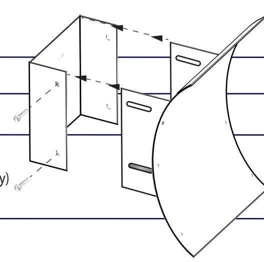
Adjustable wall support

Product: RDD AWM

Ø Diameter of the diffuser: 203, 254, 305, 356, 406, 457, 508, 559, 610, 660, 711, 762, 813, 864, 914, 965,

Color

9003 = White 9010 = Cream White
00SB = Solar Black (standard matte black) 00SM = Silver Matte (Standard metallic grey)
____ = Color RAL (write the RAL color number)



Example: RDD - AWM - 203 - 9003